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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,670	07/31/2001	Harish P. Paryani	WIDC-034/00US	4682
22903	7590	02/14/2005	EXAMINER	
COOLEY GODWARD LLP ATTN: PATENT GROUP 11951 FREEDOM DRIVE, SUITE 1700 ONE FREEDOM SQUARE- RESTON TOWN CENTER RESTON, VA 20190-5061			JUNTIMA, NITTAYA	
			ART UNIT	PAPER NUMBER
			2663	
DATE MAILED: 02/14/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/919,670	Applicant(s) PARYANI, HARISH P.	
	Examiner Nittaya Juntima	Art Unit 2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 8, 10-22 and 25-30 is/are rejected.
- 7) ☒ Claim(s) 6, 9, 23-24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 5-7, 19, 21, and 26 are objected to because of the following informalities:

- in claims 5 and 6, ll 1, “includes” should be changed to “include;”
- in claims 6 and 23, ll 2, “L2CAP” should be spelled out to avoid any

misinterpretation;

- in claim 19, ll 5, “calls set up” should be changed to “calls that are set-up;”
- in claims 19, 21, and 26, “configured to” should be changed. An alternative to the suggested change would be a written confirmation stating that the claimed element performs the actual function following “configured to.” It has been held that the recitation that an element being “configured to” perform a function is *not* a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

In addition, claim 7 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 4. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- In claims 4, and 7, ll 1, recites the limitation "said two or more of said calls" lacks antecedent basis. The office is treating this limitation as "two or more of said calls."

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-5, 7-8, 10-12, 14, 16-22, 25-30 and are rejected under 35 U.S.C. 102(e) as being anticipated by Hansson et al. ("Hansson") (USPN 6,226,279 B1).

Regarding claims 1, 19, 27, and 29, Hansson teaches a method (Fig. 8) comprising:

(a) Establishing a plurality of logical channels (polling data channels PDCHs 62 and 63) over an asynchronous channel (reads on a radio link which PDCHs and ACH must be transmitted on, col. 2, ll 20-55, col. 5, ll 22-24, col. 7, ll 17-30) between a terminal (the mobile station 55) and a gateway (base station 51, Fig. 7 of network 12, Fig. 1 which communicates with the mobile station 55, Fig. 7). See col. 7, ll 30-38.

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(b) Assigning said plurality of logical channels (polling data channels PDCHs 62 and 63) to calls (data transfers between the mobile 55 and the base station 51, Fig. 7, over PDCHs, e.g. first data transfer 73 and subsequent data transfer 74, Fig. 10) that are set-up between said terminal (the mobile station 55) and said gateway (base station 51, Fig. 7). See col. 7, ll 30-38 and col. 8, ll 31-42.

Regarding claims 2, 21, 28, and 30, Hansson teaches (c) associating the calls (data transfers) with a plurality of bearer channels (not defined, reads on channels used in carrying user data, e.g. PDCHs 63 and 63, Fig. 8) (data transfers are transmitted over channels used in carrying user data, e.g. PDCHs 62 and 63, col. 7, ll 30-38).

Regarding claim 3, Hansson teaches determining whether an existing bearer channel is available, and if so, associating a call with the existing bearer channel, and if not, establishing a new bearer channel and associating the call with a new bearer channel (the determination must be made to use a new PDCH to support a first data transfer 73 and existing PDCH to support subsequent data transfer 74, Fig. 10, col. 8, ll 31-42).

Regarding claims 4 and 7, Hansson teaches that two or more of said calls (first and subsequent data transfers, Fig. 10) can be associated with a single bearer channel (the PDCH) selected from the plurality of bearer channels (PDCHs 62 and 63, Fig. 8). See col. 7, ll 30-38 and col. 8, ll 18-42.

Regarding claims 5 and 22, Hansson also teaches that the plurality of bearer channels (not defined, reads on channels used in carrying user data) includes at least one Synchronous Connection-Oriented link (TCH channel for carrying circuit switched user data, col. 2, ll 51-53).

Regarding claim 8, Hansson teaches that the assigning is accomplished dynamically (PDCHs are dynamically allocated, col. 7, ll 30-38).

Regarding claims 10 and 25, Hansson further teaches that the calls (data transfers) comprise incoming calls (incoming data transfers, Fig. 10), outgoing calls (outgoing data transfers, Fig. 10), and intercom calls (intercommunication data transfers between mobile station 54 and 55, Fig. 7).

Regarding claims 11 and 26, Hansson teaches establishing an additional logical channel to handle data transfers between said gateway and said terminal (one or more PDCHs 62 and 63 are allocated for data transfers between a mobile station 55, Fig. 7, and network, e.g. base station 51, Fig. 7, col. 7, ll 30-38).

Regarding claim 12, Hansson teaches a method for setting up a call, wherein a asynchronous link (a radio link that must contain ACCH and TCH, col. 2, ll 20-41) is established between a gateway (base station 18, Fig. 1) and a terminal (mobile station 20, Fig. 1), the method comprising:

(a) Assigning to the call a first logical channel (ACCH) selected from a plurality of logical channels (channels in Fig. 2) over the asynchronous link (radio link), wherein the terminal (mobile station 11, Fig. 1) and said gateway (base station 12, Fig. 1) exchange signaling information (signaling information) using the first logical channel (ACCH). See col. 2, ll 20-55.

(b) Identifying a bearer channel (TCH) to carry a voice signal associated with the call (TCH must be identified in order for mobile station 20 to communicate with phone 22 in Fig. 1, col. 2, ll 16-19 and 51-55).

Regarding claim 14, Hansson teaches a method comprising:

(a) Establishing an asynchronous link between a terminal (mobile station 55, Fig. 7) and a gateway (base station 51, Fig. 7) (a radio link over an air interface carrying channel structure of Fig. 2, col. 2, ll 20-55 and col. 6, ll 33-col. 7, ll 1-9, including PDCHs and ACH, col. 7, ll 17-30, must be established to provide communication between base station 51, Fig. 7 and mobile station 55, Fig. 7).

(b) Establishing a first logical channel (ACH) over the asynchronous link (the radio link over an air interface), wherein the first logical channel carries call signaling information (ACH is established and used for control signaling for data transfer, col. 7, ll 20-23 and 30-38).

(c) Establishing a second logical channel (a first PDCH 62/63) over the asynchronous link (the radio link over an air interface), wherein the terminal (mobile station 55, Figs. 7-8) accesses data stored at the gateway (base station 51, Fig. 7) using the second logical channel (the mobile station 55 uses a first PDCH to transmit/receive data which must be stored and processed at the base station 51, col. 7, ll 30-38 and col. 8, ll 31-42, Fig. 10).

Regarding claim 16, Hansson teaches a method comprising:

(a) Receiving a request to set up a call (call setup request must be received in order to establish a call between mobile station 20 and phone 22 via base station 18, col. 2, ll 16-19) between a gateway (base station 18, Fig. 1) and a terminal (a mobile station 20, Fig. 1), wherein the call includes signaling information (signal information transmitted over ACCH, Fig. 2, col. 2, ll 38-41) and a voice signal (encoded speech transmitted over a TCH, Fig. 2, col. 2, ll 51-53).

(b) Assigning a logical channel (ACCH, Fig. 2) selected from a plurality of

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logical channels (channels shown in Fig. 2) to said call, wherein the signaling information is exchanged via the logical channel (col. 2, ll 38-41).

(c) Associating the call with a bearer channel (TCH, Fig. 2) to carry the voice signal (col. 2, ll 38-41 and 51-53).

Regarding claim 17, Fig. 1 shows that the gateway (base station 18) is coupled to a network (12) via a plurality of lines, and the call is carried on one of the plurality of lines (col. 2, ll 16-19).

Regarding claim 18, Hansson teaches that the network (12) comprises a PSTN (col. 2, ll 8-12 and 16-19).

Regarding claim 20, it is inherent that the gateway (base station 51 in Fig. 7) must be coupled to a network (e.g. 12, Fig. 1) via a plurality of lines as shown in Fig. 1.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansson et al. ("Hansson") (USPN 6,226,279 B1) in view of "QoS Based Scheduling for Incorporating Variable Rate Coded in BLUETOOTH" by Chawla et al. ("Chawala").

Regarding claims 6 and 23, Hansson fails to teach that the plurality of bearer channels include at least one L2CAP channel carrying voice over data.

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However, Chawala teaches that L2CAP channel carries voice over data (since ACL has L2CAP layer, page 1233, paragraph 3, and voice is carried over ACL, page 1234, section B, therefore, L2CAP must be carry voice packets).

Given the teaching of Chawala, it would have been obvious to one skilled in the art to modify the teaching of Hansson to include that the plurality of bearer channels include at least one L2CAP channel carrying voice over data in order to enable the terminal to be utilized in a Bluetooth environment in a pico-cellular wireless system.

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansson et al. ("Hansson") (USPN 6,226,279 B1) in view of Yang et al. ("Yang") (USPN 6,438,113 B1).

Regarding claim 13, Hansson does not teach determining whether to use an existing bearer channel, and if so, carrying the voice signal on the existing bearer channel, and if not, establishing a new bearer channel to carry the voice signal.

However, Yang teaches establishing a new bearer channel (a new TCH) to carry an additional voice signal (a new call) in addition to an existing call on an existing TCH, col. 3, ll 50-60.

Given the teaching of Yang, it would have been obvious to one skilled in the art to modify the teaching of Hansson to include determining whether to use an existing bearer channel, and if so, carrying the voice signal on the existing bearer channel, and if not, establishing a new bearer channel to carry the voice signal. The suggestion/motivation to do so would have been to utilize an additional TCH to accommodate a new call in addition to the existing call.

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8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansson et al. ("Hansson") (USPN 6,226,279 B1) in view of Bottum (USPN 6,014,569).

Regarding claim 15, Hansson teaches (d) establishing a third logical channel (a second PDCH 62/63, col. 7, ll 30-38) over the asynchronous link (the radio link over an air interface); and (e) associating the third logical channel with the first logical channel (a second PDCH is established by sending a data registration signal on the ACH, col. 7, ll 30-38).

However, Hansson fails to teach that the third logical channel acts as a bearer of VoIP data.

Bottum teaches that VoIP data (voice packets) is transmitted on channel (time slot) of a radio channel (col. 1, ll 21-40).

Given the teaching of Bottum, it would have been obvious to one skilled in the art to modify the teaching of Hansson to include that the third logical channel acts as a bearer of VoIP data. The motivation/suggestion to do so would have been to enable voice packets to be transmitted over time slot of a radio channel as taught by Bottum (col. 32-36).

Allowable Subject Matter

9. Claims 9 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art alone or in combination fail to teach or make obvious on including that the plurality of

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logical channels comprise a plurality of L2CAP channels when considered in combination with other limitations recited in dependent claims 9 and 24.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Hale et al. (USPN 6,721,274 B2), disclosing Bluetooth protocol stack (Fig. 1).
- Takabatake et al. (EP 1 113644 A2), disclosing data transfer method over L2CAP channels (Fig. 2).
- Salokannel et al. (USPN 6,823,186 B2), disclosing channel allocation between slave devices and a master device (Abstract and Fig. 1).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nittaya Juntima whose telephone number is 571-272-3120. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nittaya Juntima
February 7, 2005

NJ


RICKY NGO
PRIMARY EXAMINER